



# **JJ Seifert Machine Shop Priority Panel Presentation**





### Overview

## Site Layout

4212 Old US Highway 41

Ruskin, Hillsborough County, Florida

## Site Highlights

Area zoned Light Industrial & Residential

Release from degreasing operations

~ 20 affected properties

~ 6 filters on private wells

FDEP Maintained

Chlorinated solvent and metal COCs

Contaminant migration into Floridan

GW flows to the South West

Surficial Aquifer (10-60 ft. bgs)

Intermediate Aquifer (60-220 ft. bgs)

Floridan Aquifer (220+ ft. bgs)

Remedy Alternative:

Soil Excavation/Disposal/ICs

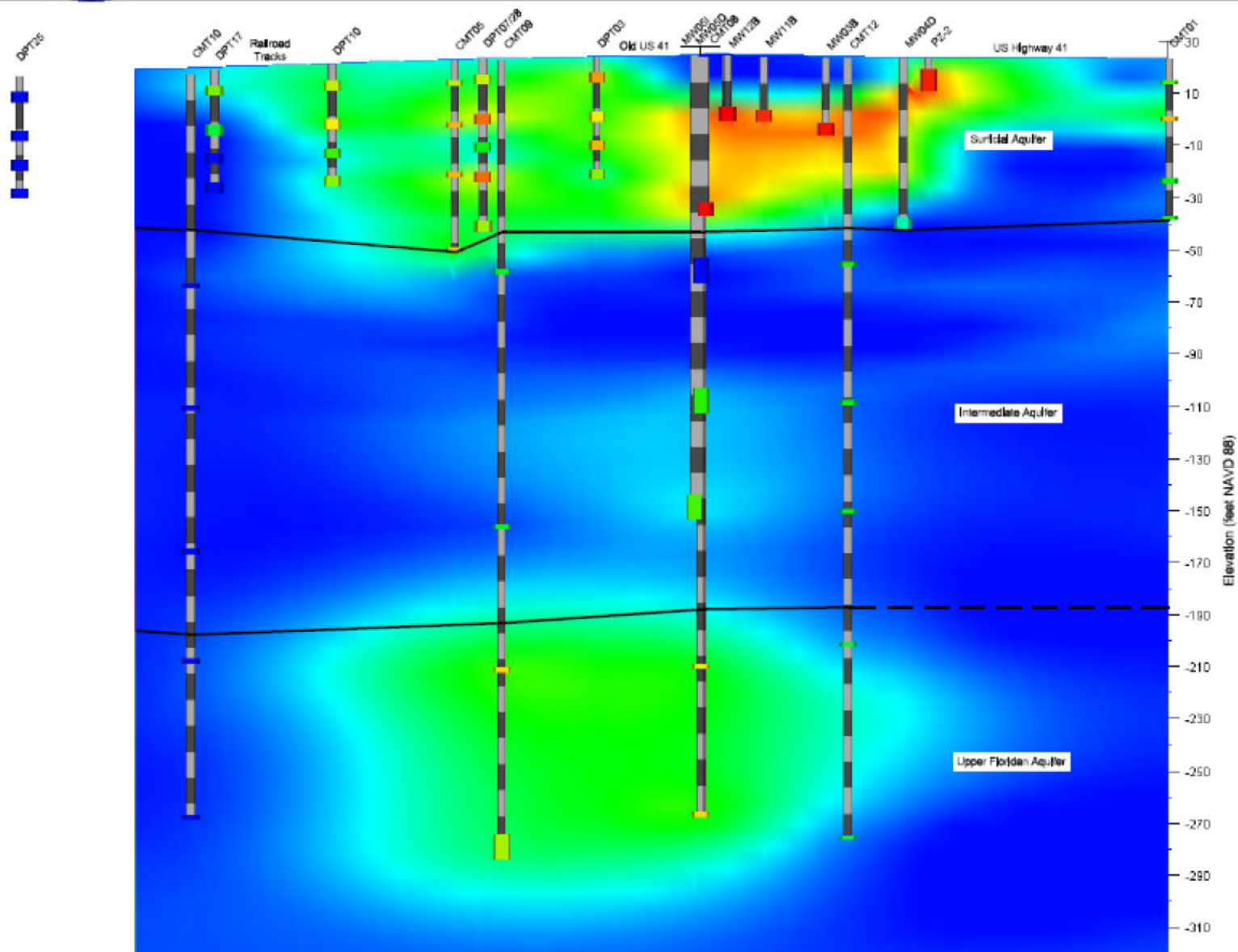
Filters/ISEB/MNA/ICs



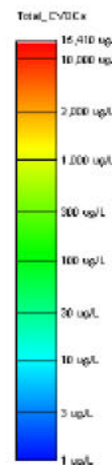


# JJ Seifert Machine Shop Presentation

## Remedial Investigation



### Legend



Note: See Figure 5-10 for cross section location.



J.J. Seifert Machine Shop  
US EPA ID # FLN000410232  
Ruskin, Hillsborough County  
Florida

Figure 5-11  
Total Chlorinated VOCs  
Cross Section



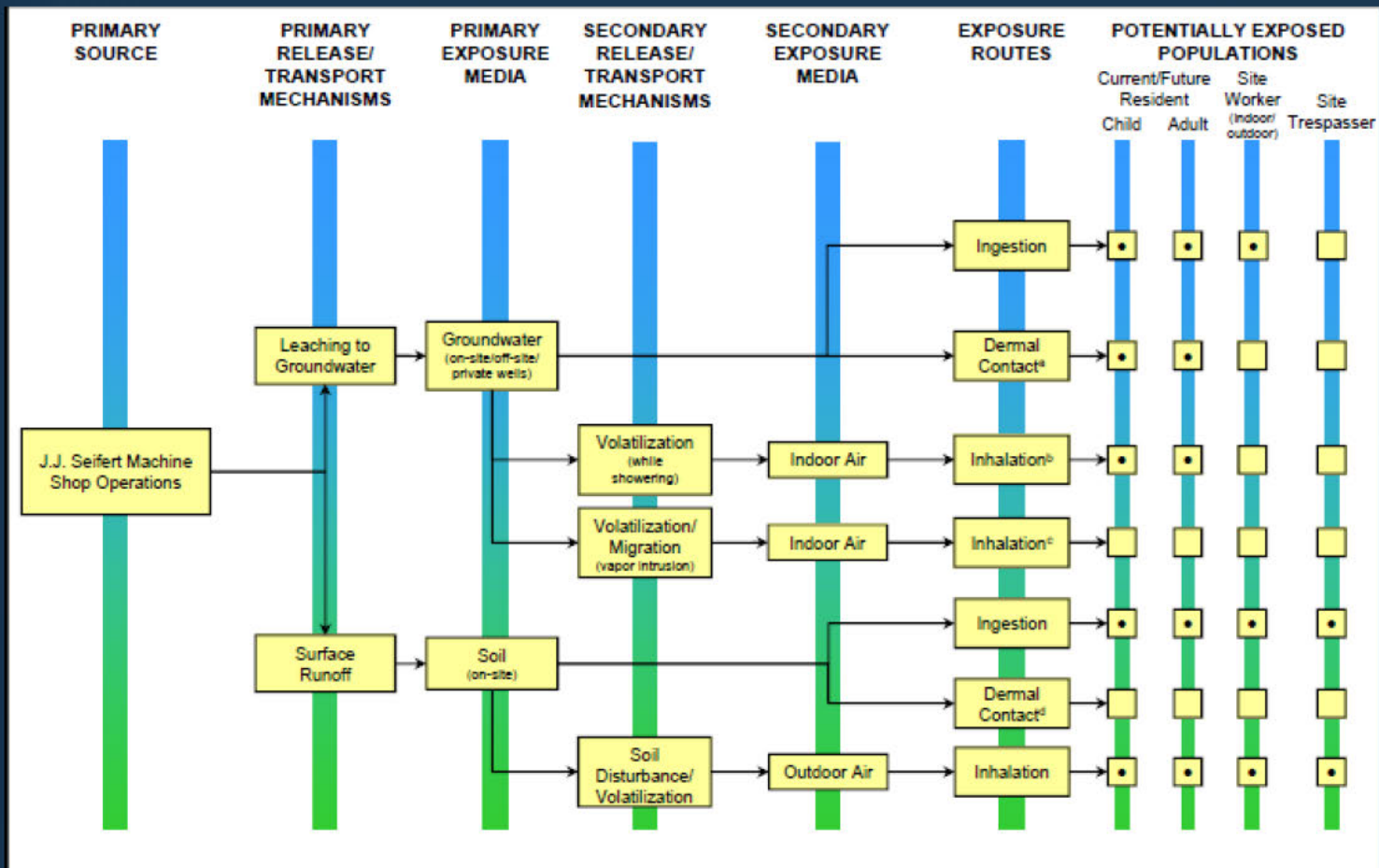


RI/FS

HHRA

COCs

### Human Health Risk Assessment (HHRA)





RI/FS >

HHRA >

COCs >

### Human Health Risk Assessment (HHRA) Risk Scenarios

Exposure Scenario	Risk Category	Future Worker	Future On-Site Resident	Future Off-Site Resident
Surface Soil	Age Adjusted Cancer	4.80E-05	5.10E-04	N/A
	Adult HI	0.09	0.07	N/A
	Child HI	N/A	6.50E-01	N/A
Surficial Aquifer	Age Adjusted Cancer	1.40E-03	1.10E-02	3.10E-03
	Adult HI	102	170	18
	Child HI	N/A	395	43
Intermediate Aquifer	Age Adjusted Cancer	3.80E-05	3.20E-04	1.00E-06
	Adult HI	6.4	0.63	0.96
	Child HI	N/A	1.5	2.3
Upper Floridan Aquifer	Age Adjusted Cancer	3.80E-05	2.00E-04	1.90E-04
	Adult HI	5	8.2	6.5
	Child HI	N/A	19	15



RI/FS >

HHRA >

COCs >

## Contaminants of Concern

So Co Te	Table 8-2 Ground Water Contaminants of Concern Cleanup Levels				
	GW Contaminant of Concern	Contaminant Concentration Range (µg/L)	EPA Maximum Contaminant Level (µg/L)	FDEP Groundwater Cleanup Target Level (µg/L)	Ground Water Cleanup Level (µg/L)
cis	Tetrachloroethene	0 - 17,000	5	3	3
Vi	Trichloroethene	0 - 2,300	5	3	3
Ba	cis-1,2-Dichloroethene	0 - 3,400	70	70	70
Ch	1,1-Dichloroethene	0 - 38	7	7	7
Le	Vinyl Chloride	0 - 780	2	1	1



Remedy >

Cost >

RAOs >

### Soil Response Actions

- Excavation of all contaminated soil exceeding leachability criteria above the water table, near the drum storage pad and along the southern perimeter of the machine shop to clean up levels.
- Characterization of the contaminated soils and temporary storage in compliance with ARARs, including requirements for RCRA hazardous waste.
- Off-Site disposal of excavated soils at permitted RCRA Subtitle C (hazardous waste) or RCRA Subtitle D (solid waste)

### GW Response Actions

- Continued well-head treatment of treatment systems on supply wells
- In-Situ Enhanced Bioremediation of the surficial aquifer
- In-Situ Enhanced Bioremediation of the Upper Floridan aquifer
- Monitoring of ground water over time to ensure that contaminants are naturally attenuating and will achieve levels of ground water uses.
- Institutional controls to prevent unacceptable exposure to contaminated ground water





# JJ Seifert Machine Shop Presentation

2013 ROD

Remedy >

Cost >

RAOs >

Soil Remedy Alternatives		Capital	O&M NPW	Total NPW (30 yr)
S-1	No-Action	\$0	\$0	\$0
S-2A	Excavation, Off-Site Disposal and ICs	\$301,000	\$94,000	\$395,000
S-2B	Excavation , Off-Site Disposal, and ICs	\$287,000	\$94,000	\$381,000
S-3	Excavation, Off-Site Disposal, Capping, and ICs	\$297,000	\$102,000	\$399,000

GW Remedy Alternatives		Capital	O&M NPW	Total NPW (30 yr)
GW-1	No-Action w/ Continued Wellhead Treatment	\$0	\$0	\$0
GW-2	Wellhead Treatment, MNA, and ICs	\$172,000	\$2,666,000	\$2,868,000
GW-3A	Wellhead Treatment, ISEB, MNA, and ICs	\$1,590,000	\$2,150,000	\$3,740,000
GW-3B	Wellhead Treatment, ISEB (surficial and Upper Floridan), MNA, and ICs	\$2,238,000	\$2,181,000	\$4,419,000
GW-4	Public Water Supply, Wellhead Treatment, MNA, and ICs	\$2,585,000	\$1,923,000	\$4,508,000
GW-5	Public Water Supply, Wellhead Treatment, ISEB, MNA, and ICs	\$3,829,000	\$1,574,000	\$5,403,000





Remedy



Cost



RAOs



## Remedial Action Objectives

### Soil RAOs:

- Prevent human exposure to surface and subsurface soil with concentrations of COCs above levels that are protective of residential and industrial use.
- Prevent migration of COCs to ground water to levels that are protective of beneficial use (drinking water use).

### Ground Water RAOs:

- Prevent human exposure (ingestion, direct contact, and inhalation) to COCs in ground water to levels that are protective of residential and industrial use.
- Restore ground water to levels that allow beneficial use (drinking water standards).



**Questions/Comments/Thank You**





Alternatives >

Preferred >

# Exemption 5 - DP





# JJ Seifert Machine Shop RDT Presentation

## Remedy Selection

Alternatives >

Preferred >

Evaluation Criteria	Evaluation Criteria Threshold Criteria	Remedial Alternative and Comparison				
		GW-1. No Action with Continued Monitoring and Treatment	GW-2. Wellhead Treatment, MNA, and ICS	GW-3. Wellhead Treatment, ISEB, MNA, and ICS	GW-4. Alternative Drinking Water Supply, MNA, and ICS	GW-5. Alternative Drinking Water Supply, ISEB, MNA, and ICS
		S-1: No Action	S-2A: Excavation, Off-Site Disposal, and ICs	S-2B: Excavation, Off-Site Disposal, and ICs	S-3: Excavation, Off-Site Disposal, and ICs	S-4: Excavation, Off-Site Disposal, and ICs
Overall Protection of Human Health and Environment	Overall Protection of Human Health and Environment	Not protective. Since groundwater remains source of drinking water supply (although ICS before use). Also no active treatment of surficial aquifer.	Most protective because it would physically remove the contamination and eliminate drinking water supply (although ICS before use). More protective than GW-2 due to treatment of surficial aquifer.	Less protective than S-2A because contaminated soil at south end of building would be left in place, but still contamination left in place. More protective than GW-2 or -3 due to alternative water supply.	Slightly less protective than GW-5 due to active treatment of surficial aquifer. More protective than GW-2 or -3 due to alternative water supply.	Most protective since it eliminates groundwater as drinking water supply, treats surficial aquifer contamination, and controls groundwater use.
Compliance with ARARs	Compliance with ARARs	Would not comply	Would comply	Would comply	Would comply	Would comply
Primary Balancing Criteria	Primary Balancing Criteria	None of the alternatives include treatment of the soil through Treatment	Less effective and permanent than GW-3 or GW-4. All would have equal short-term effectiveness with limited treatment of surficial aquifer.	Slightly less effective and permanent than GW-3 or GW-4 due to treatment of surficial aquifer.	Less effective and permanent than GW-3 or GW-4 due to treatment of surficial aquifer. More permanent than GW-2 through providing permanent alternative water supply.	Most effective and permanent through providing alternative water supply, treating surficial aquifer, and controlling groundwater use.
Long-Term Effectiveness and Permanence	Long-Term Effectiveness and Permanence	Nothing to implement	All would be equally implementable although less than S-1.	Nothing to implement	Nothing to implement	Nothing to implement
Capital Cost	Capital Cost	\$0	\$301,000	\$301,000	\$287,000	\$287,000
O&M NPW	O&M NPW	\$239,000	\$2,666,000	\$2,150,000	\$1,923,000	\$1,574,000
NPW of O&M** NPW**	NPW of O&M** NPW**	\$239,000	\$2,838,000	\$3,740,000	\$4,508,000	\$5,403,000
Reduction of Contaminant Toxicity, Mobility, or Volume through Treatment	Reduction of Contaminant Toxicity, Mobility, or Volume through Treatment	Wellhead treatment would reduce exposure but it is not expected to reduce the toxicity, mobility or volume of the plume.	Wellhead treatment would reduce exposure but it is not expected to reduce the toxicity, mobility or volume of the plume.	Surficial aquifer would be treated to reduce toxicity and volume.	No treatment would be performed.	Surficial aquifer would be treated to reduce toxicity and volume.
Short-Term Effectiveness	Short-Term Effectiveness	No short-term effects but would likely never reach protectiveness.	Minimal short-term effects and short time to protectiveness.	More short-term effects than GW-2 due to ISEB. Short time to protectiveness.	Slightly less short-term effects than GW-5 due to no ISEB, but more than GW-2 or GW-3 due to water line extension. Same time to protectiveness as GW-5.	Greatest amount of short-term effects due to water line extension and ISEB. Also longer time to protectiveness than GW-2 or -3.
Implementability	Implementability	Nothing to implement	Easier to implement than GW-3, -4, or -5 since no ISEB or water line extension.	More difficult to implement than GW-2 due to ISEB but less than GW-4 or GW-5 since no water line extension.	More difficult to implement than GW-2 or -3 due to water line extension, but less than GW-5 since no ISEB.	Most difficult to implement due to both ISEB and water line extension.